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12. (twice amended) A web-based system for facilitating diagnosis of medical symptoms comprising:
- (a) means for generating an automated database that is a real-time, web-based [system] database that includes statistically accrued data [that is] input from multiple sources via a common web-based system template, the common web-based system template providing a medium for entering data into the database that includes actual diagnoses and patient symptoms and information from patient populations, and further, the common web-based system template being used to generate a matrix that includes a plurality of possible post-test diagnostic outcomes, each outcome indicating a possible disease and probability for the disease, and further, reporting the possible post-test outcomes to a user as a list of diagnostic probabilities ranked from the most likely to the least likely of possible diagnoses for a patient under examination; [with] and further including

25 (b) means for generating each possible post-test outcome in the matrix [being generated from] as an array of mathematical factors, multiplied together in series, that are based on patient symptoms and information, with one of the factors being a pre-test odds factor, and with the other factors in the array being input as a plurality of independent likelihood ratios that are produced from answers to individual patient questions and results from diagnostic tests for that patient, and wherein the likelihood ratios in the array are multiplied together with the pre-test odds_factor to produce the possible post-test diagnostic outcome that indicates a possible disease and probability for the disease; and still further including:

30 (c) means for calculating each likelihood ratio [is calculated] from a web-based likelihood ratio template, the likelihood ratio template having a plurality of cells, each with an independent cell value, created by a user-selected number of rows and columns that is greater than 2 X 2, for calculating likelihood ratios based on more than two [criterion] criteria, the more than two [criterion] criteria including positive and negative test results and further including other criteria that are independent of test results, and still further, each likelihood ratio being calculated by calculating a positive likelihood ratio (“positive LR”) and negative likelihood ratio (“negative LR”) for each cell value in each column and each row, using an algorithm that includes the following mathematical expressions:

35 (1) Positive LR = $(X/a) / ((b - X)/(M - a))$;

40 (2) Negative LR = $(a - X/a) / ((M - a) - (b - X)/(M - a))$;

45 and wherein X = a mathematical cell value;

M = the sum of all cell values across all rows and columns;